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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/522,958	03/10/2000	Katsuhiko Asai	15162/01590	4595

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EXAMINER

CHOW, DOON Y

ART UNIT PAPER NUMBER

2675

DATE MAILED: 12/30/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

✓

# Office Action Summary

Application No.

09/522,958

Applicant(s)

ASAI ET AL.

Examiner

Dennis-Doon Chow

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 5-6, 8-18, 20, 23-24, 26, 28-32, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell "Cholesteric LCDs show images after power is turned off" in view of Iwamoto (4802739) and Mio (5463408).

Powell discloses a liquid crystal display device comprising: a liquid crystal display which uses reflective type liquid crystal with a memory effect (page 99, second paragraph), wherein the liquid crystal display exhibits a cholesteric phase. Powell also discloses turning power off and displaying images while the power is off (see title). The liquid crystal display inherently comprises a power supply circuit, an input means, a driving circuit, a controller, a controller and central processing unit for generating and outputting image information.

Powell does not explicitly disclose the use of a booster circuit.

Iwamoto, in the same display field discloses a power supply comprising a booster circuit for boosting a voltage level to a desired level.

It would have been obvious to one of ordinary skill in the art to use Iwamoto's booster circuit in Powell's power supply for the same reason as Iwamoto uses in the his invention, which is boosting a voltage level to a desired level.

Powell does not disclose using a specific method for turning the power off in the display device.

Mio, in the same display field, discloses turning power off in a liquid crystal display device by inactivating a power supply circuit using a controller unit, wherein internal circuits are also inactivated when the power supply circuit is inactivated. The display device comprises a timer for controlling the timing of turning the power off.

It would have been obvious to one of ordinary skill in the art to use Mio's power off method in Powell's invention to turn the power off since Powell does not teach using any specific method for turning the power off.

3. Claims 3-4, 7 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell "Cholesteric LCDs show images after power is turned off" in view of Choi (6115033).

Powell discloses a liquid crystal display device comprising: a liquid crystal display which uses reflective type liquid crystal with a memory effect (page 99, second paragraph), wherein the liquid crystal display exhibits a cholesteric phase. Powell also discloses turning power off and displaying images while the power is off (see title). The liquid crystal display inherently comprises a power supply circuit, an input means, a

driving circuit, a controller, a controller and central processing unit for generating and outputting image information.

Powell does not disclose using a specific method for turning power off in the display device.

Choi discloses a display device comprising a power saving means for saving power consumption. The power saving means includes a controlling means for activating a sleep mode of a central processing unit (a microcomputer, see abstract).

It would have been obvious to one of ordinary skill in the to use Choi's concept in Powell's invention to turn the power off since Powell does not teach using any specific method for turning the power off

4. Claims 19, 27, 35, 37, 38, 40, 41, 43, 44, and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell "Cholesteric LCDs show images after power is turned off" in view of Mio (5463408).

Powell discloses a liquid crystal display device comprising: a liquid crystal display which uses reflective type liquid crystal with a memory effect (page 99, second paragraph), wherein the liquid crystal display exhibits a cholesteric phase. Powell also discloses turning power off and displaying images while the power is off (see title). The liquid crystal display inherently comprises a power supply circuit, an input means, a driving circuit, a controller, a controller and central processing unit for generating and outputting image information.

Powell does not disclose using a specific method for turning power off in the display device.

Mio, in the same display field, discloses turning power off in a liquid crystal display device by inactivating a power supply circuit using a controller unit, wherein internal circuits are also inactivated when the power supply circuit is inactivated. The display device comprises a timer for controlling the timing of turning the power off.

It would have been obvious to one of ordinary skill in the art to use Mio's power off method in Powell's invention to turn the power off since Powell does not teach using any specific method for turning the power off.

5. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powell "Cholesteric LCDs show images after power is turned off" in view of Mio (5463408) and Fitch (5912653).

. Powell discloses a liquid crystal display device comprising: a liquid crystal display which uses reflective type liquid crystal with a memory effect (page 99, second paragraph), wherein the liquid crystal display exhibits a cholesteric phase. Powell also discloses turning power off and displaying images while the power is off (see title). The liquid crystal display inherently comprises a power supply circuit, an input means, a driving circuit, a controller, a controller and central processing unit for generating and outputting image information.

Powell does not disclose using a specific method for turning power off in the display device.

Mio, in the same display field, discloses turning power off in a liquid crystal display device by inactivating a power supply circuit using a controller unit, wherein internal circuits are also inactivated when the power supply circuit is inactivated. The display device comprises a timer for controlling the timing of turning the power off.

It would have been obvious to one of ordinary skill in the art to use Mio's power off method in Powell's invention to turn the power off since Powell does not teach using any specific method for turning the power off.

Powell does not disclose the use of a flexible substrate. However, using flexible substrates in a LCD device to make the LCD device flexible is well known in the art as shown by Fitch (see abstract). Thus, it would have been obvious to one of ordinary skill in the art to use the flexible substrates in Powell's liquid crystal display device to make the display device flexible. By doing so, the display device can be protected from damaging by sudden impact.

6. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Powell "Cholesteric LCDs show images after power is turned off" in view of Iwamoto (4802739) and Mio (5463408) as applied to claims 1-2, 5-6, 8-18, 20, 23-24, 26, 28-32, and 34 above, and further in view of Fitch.

The above disclosures of Powell, Iwamoto, Mio and Fitch applied here.

7. Claims 36, 39, 42, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Powell "Cholesteric LCDs show images after power is turned off" in

view of Mio (5463408) as applied to claim 19, 27, 35, 37, 38, 40, 41, 43, 44, and 46 above, and further in view of Iwamoto.

The above disclosures of Powell, Mio and Iwamoto applied here.

### ***Response to Arguments***

8. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

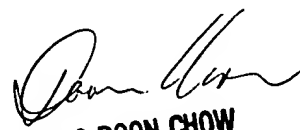
### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis-Doon Chow whose telephone number is 703-305-4398. The examiner can normally be reached on 8:30-6:00, Alternate Monday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras can be reached on 703-305-9720. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.

D. Chow  
December 27, 2002

  
DENNIS-DOON CHOW  
PRIMARY EXAMINER